



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

GEOGRAPHICAL PUBLICATIONS

(Reviews and Titles of Books, Papers, and Maps)

For key to classification see "Explanatory Note" in the July number, pp. 77-81

NORTH AMERICA

UNITED STATES

South-Central States

FOSTER, J. H. **Forest conditions in Louisiana.** 39 pp.; maps, ills. *Forest Service Bull. 114.* U. S. Dept. of Agric., Washington, 1912.

The geographical divisions of Louisiana are better understood than those of some other states, owing largely to the researches of Dr. E. W. Hilgard in 1869 and 1877 (see his map in Tenth Census reports, Vol. 5, opposite page 111). In the bulletin before us the state is divided into six or seven divisions, corresponding in a general way with Hilgard's, namely: short-leaf pine uplands, long-leaf pine region (including both hills

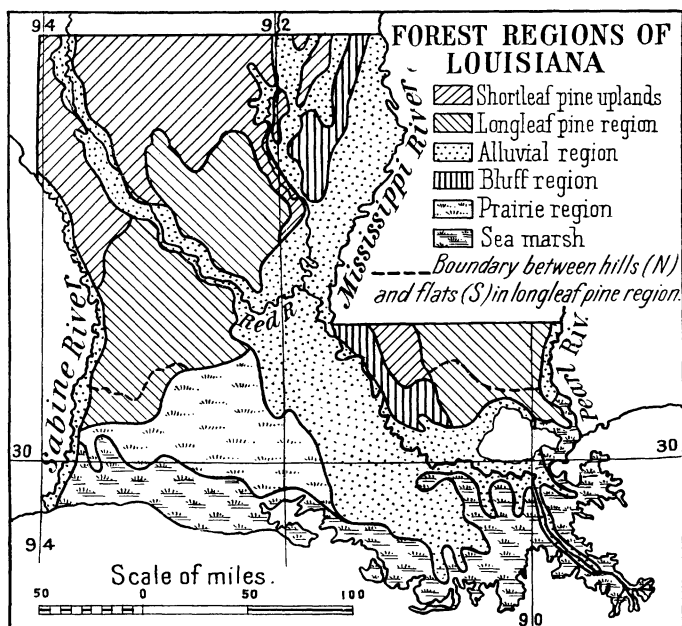


FIG. 1—The forest regions of Louisiana, according to J. H. Foster (*U. S. Forest Service Bull. 114*, 1912.)

and flats), alluvial region, bluff region, prairie region, and sea marshes. The forest conditions are briefly described, about two and a half pages being devoted to each of the timbered regions and a few lines to the last two, which are essentially treeless. Statistics are given of land and timber values, density of forests, amount of timber remaining, etc. There are four excellent half-tones showing different forest types and three small state maps in the text.

From the standpoint of the forester the long-leaf pine and alluvial regions are most important, the former yielding pine timber and naval stores and the latter cypress and hardwoods. Some of the densest long-leaf pine forests in the world are in western Louisiana, and a stand of 45,000 feet per acre of cypress is reported from one of the northeastern parishes.

Only about 20 per cent of the total area is under cultivation at present, and in recent years Louisiana has led all the states in annual cut of long-leaf pine, cypress, and tupelo gum, and all except Washington in aggregate lumber. In 1909, the latest year for which there are reasonably complete figures, the total cut was over 3,500,000,000 feet, of which slightly over three-fourths was pine. Some estimates of the total standing timber in the state were taken, a few months in advance of publication, from a report of the U. S. Bureau of Corporations on the lumber industry of the United States. The total stand is given as 119,800,000,000 feet, of which 56.5 per cent is pine of various species, 13.1 per cent cypress, and 30.4 per cent hardwoods.

The bulletin closes with a discussion of some of the influences that threaten the perpetuity of the forests, such as fire, grazing, lumbering, wind-storms, and taxation, and a summary of recent local legislation on forest problems. As in most other similar works written by northern foresters, fire is treated not so much as a natural phenomenon, whose frequency varies considerably in different regions and has much to do with the normal life-history of the forests, but as a regrettable accident, to be prevented in all forests if possible. It is conceded, however, that it is not a serious menace in the alluvial region.

ROLAND M. HARPER.

BAKER, C. L. **Geology and underground waters of the northern Llano Estacado.** v and 225 pp.; maps, diagrs., ills., index. *Bull. Univ. of Texas*, 1915, No. 57. Austin, 1915. [A publication of the Bur. of Econ. Geol. and Technol.]

BURKE, R. T. A., AND A. M. O'NEAL, JR. **Soil survey of Limestone County, Alabama.** 41 pp.; maps. Bur. of Soils, U. S. Dept. of Agric., Washington, D. C., 1916.

CRIDER, A. F. **The coals of Letcher County [Kentucky].** xvi and 234 pp.; maps, diagrs. *Kentucky Geol. Surv. [Repts.]*, Ser. 4, Vol. 4, Part 1. Frankfort, 1916.

DUMBLE, E. T. **Problem of the Texas Tertiary sands.** Maps, ills., bibliogr. *Bull. of the Geol. Soc. of America*, Vol. 26, 1915, No. 4, pp. 447-476.

HUMPHREYS, W. J. **The southern Appalachian earthquake of February 21, 1916.** Map. *Monthly Weather Rev.*, Vol. 44, 1916, No. 3, pp. 154-155.

LEE, WALLACE. **Geology of the Kentucky part of the Shawneetown quadrangle.** 73 pp.; map. Kentucky Geol. Surv., Frankfort, 1916. [Including report on deposits of coal, the only mineral of economic importance within the area.]

LEWIS, H. G., AND J. F. STROUD. **Soil survey of Lawrence County, Alabama.** 50 pp.; maps. Bur. of Soils, U. S. Dept. of Agric., Washington, D. C., 1916.

MARKHAM, E. M. **Father of waters [Mississippi River] in flood.** *Engineering News*, Vol. 75, 1916, No. 6, pp. 286-287.

MEYER, A. H., E. S. VANATTA, B. W. TILLMAN, AND R. F. ROGERS. **Soil survey of Webster Parish, Louisiana.** 40 pp.; maps. Bur. of Soils, U. S. Dept. of Agric., Washington, D. C., 1916.

Western States

BOWLBY, H. L. **The Columbia highway in Oregon.** *Amer. Forestry*, No. 271, Vol. 22, 1916, pp. 411-416. [A well-illustrated description of the new highway from Portland to Hood River, 60 miles, which extends across marshlands, valleys, and mountains, through dense forests, and along the brink of a canyon, to the open country east of the Cascades. The route was chosen so as to give splendid views of the scenic features of Oregon.]

— **Columbia Highway, The new.** Diagr., ills. *World's Work*, Vol. 32, 1916, No. 2, pp. 202-215. [A short description also appears in the *Scientific American* (Vol. 114, No. 25, 1916) under the title "A Beautiful Link in Our Highway System."]

— **Columbia River highway, The.** Ills. *Scientific American Suppl.*, No. 2113, Vol. 82, 1916, July 1, p. 8.

DAVIS, A. P. **Power possibilities of Federal irrigation projects.** *Engineering News*, Vol. 75, 1916, No. 19, p. 875.

DICE, L. R. **Distribution of the land vertebrates of southeastern Washington.** Map, ills., bibliogr. *Univ. of California Publs. in Zool.*, Vol. 16, 1916, No. 17, pp. 293-341. [This area of southeastern Washington (Walla Walla and Columbia Counties) embraces three phytogeographic regions in the sage brush of the Columbia River section, the bunch grass of the prairie to the east, and the coniferous forest of the Blue Mountains. Faunal areas correspond. Description of their characteristics is followed by a consideration of the general zoögeographic position of the entire region and the author's scheme of ecological distribution compared with others.]

DILLER, J. S. **The volcanic history of Lassen Peak.** Maps. *Science*, May 26, 1916, pp. 727-733.

DREW, N. L. **Building the world's highest highway.** Ills. *Scientific American*, Vol. 114, 1916, April 8, No. 15, p. 375. [Pikes Peak.]

FLETT, J. B. **Features of the flora of Mount Rainier National Park.** 50 pp.; ill., index. Dept. of the Interior, Washington, D. C., 1916. [See comment in the November *Review*, p. 386, on G. F. Allen's "The Forests of Mount Rainier National Park."]

GROVER, N. C. **Surface water supply of the United States, 1913. Part 9: Colorado River basin.** 260 pp.; ill., index. *U. S. Geol. Surv. Water-Supply Paper 359*. Washington, 1916.

GROVER, N. C. **Surface water supply of the United States, 1912. Part 12: North Pacific drainage basins.** xi and 748 pp.; ill., index. *U. S. Geol. Surv. Water-Supply Paper 332*. Washington, 1916.

HACKETT, C. W. **Otermin's attempt to reconquer New Mexico, 1681-1682.** Bibliogr. *Old Santa Fe*, Vol. 3, 1916, No. 9, pp. 44-84; No. 10, pp. 103-132. Santa Fe, N. M.

HARDESTY, W. P. **Precise-level survey of the city of Portland, Oregon.** Diagr., ill. *Engineering News*, Vol. 76, 1916, No. 2, pp. 55-58.

HARRIS, J. A. **The variable desert.** Diagr., ill. *Scientific Monthly*, Vol. 3, 1916, No. 1, pp. 41-50. ["The striking characteristic of this whole region [the deserts of the Southwest] is heterogeneity, variability, contrast."]

HENRY, A. J. **The disappearance of snow in the high Sierra Nevada of California.** *Monthly Weather Rev.*, Vol. 44, 1916, No. 3, pp. 150-153.

HILL, C. L. **Forests of Yosemite, Sequoia, and General Grant National Parks.** 39 pp.; ill. Dept. of the Interior, Washington, 1916. [See comment in the November *Review*, p. 386, on G. F. Allen's "The Forests of Mount Rainier National Park."]

HOLWAY, R. S. **Lassen's second year of rejuvenation.** Ills. *Sierra Club Bull.*, Vol. 10, 1916, No. 1, pp. 92-97. [Carries the record of eruption to October 30, 1915.]

HUNTINGTON, ELLSWORTH. **Death Valley and our future climate.** Ills. *Harper's Mag.*, No. 792, Vol. 132, 1916, May, pp. 919-928. [The strange series of old lake beds in the desert region from Owens to Death Valley preserves records of climatic changes during the past and demands more careful study that impending changes may be predicted. Such a change, for instance, as appears to have occurred in the later thirteenth century would be followed by serious consequences for the country as a whole in view of the economic effects it would produce in the region of "critical" rainfall of the agricultural Middle West.]

EUROPE

GENERAL

GRANT, MADISON. **The Passing of The Great Race, or the racial basis of European history.** xxi and 245 pp.; maps, index, bibliogr. Charles Scribner's Sons, New York, 1916. 9½ x 6.

A geographer of the eighteenth century, Alexander Dalrymple, once remarked "every new undertaking must be dragged up a very steep hill." Mr. Grant's book deals with an old theme in a radically new way but with a literary brilliance and finish that never permits one to realize until the book is closed that the course runs up a very steep hill. Of more importance, he has had the courage to state his conclusions in terms of unmistakable force and clarity. To be sure these desirable qualities are achieved at the expense of much detail that the meticulous reader will miss. Everywhere the direct road is taken to a conclusion that is stated with epigrammatic brevity. It is a book from which the historical and the anthropological writer will quote freely.

The central theme is the Nordic race—its origin, its distribution in late geologic and in historic times, its inherent and stable, in a word, its racial qualities, particularly those which have made it great (Mr. Grant would say "greatest"). These qualities are in part reactions to a former environment, in part the result of contact with neighboring races, in part a spiritual endowment of the race as obscure in its origin as man himself. The author's purpose has been to set forth the facts of race, the reactions of race, race and development, and especially to show both directly and by implication that, in the great panorama of human history, environment on the one hand and language and nationality on the other are agencies with an important but limited field of action.

Those geographers to whom the phrase "geographic control" is a dogma will do

well to read with special care the chapter on Race and Habitat; those to whom the metes and bounds of nationality and language are sacred, the chapter on Race, Language, and Nationality. Geographers will find here and there an approach to the question of environmental influences, but to their regret they will not encounter a discussion of this broad question, though this indeed would require a book to itself. On the other hand the influence of environment is not minimized. It is shown that its effects on primal habits are best illustrated when the race leaves its ancient centers of action and over-spreads neighboring lands that present new problems in adjustment, as in the case of the successive human floods that poured over the Afghan passes, or those waves of conquest in which the Nordics left their isolating forests and seas and set their vigor against the feebler qualities of the peoples of the south only in turn to fall a prey to the enervating climate of Mediterranean lands.

In geographic science the book is important because it will stimulate anew the question of the relative parts which heredity and environment play in human development. For the whole interpretation of the world's peoples surely requires attention both to the primal and inheritable qualities of race and to the impact of physical conditions upon the frame and spirit of man, his migrations, and his character. Geographers pay much attention to the latter group of influences but too little to racial traits. It would be a worthy task to have both groups set forth in their relative importance, working from such foundations as this book and others in the same field provide.

GERMANY

BENKENDORFF, RUDOLF. *Die Isothermen Schleswig-Holsteins und klimatische Messungen auf Föhr.* Inaugural-Dissertation . . . der Universität Kiel. Schmidt & Klaunig, Kiel, 1914. 9 x 6.

The island of Föhr lies off the coast of Schleswig-Holstein. Because of its sheltered location and mild climate it is much frequented by invalids. There is, therefore, considerable interest in its somewhat special local climatic peculiarities. These have been made the subject of investigation by the present author, who, for purposes of comparison, has also studied the temperature conditions of Schleswig-Holstein and has constructed a new set of monthly isothermal charts of this area. In 1869 Professor G. Karsten published a discussion entitled "Die Verteilung der Wärme in den Herzogtümern Schleswig und Holstein," in which were included two isothermal charts, for January and July. In winter and autumn the temperatures are lower over the land than the water; in April to July the temperature increases from west to east, i.e., to leeward, from the water onto the land. The temperature differences are greatest in October, November, December, and June (about 2° C.). February and August show the most uniform distribution. The diurnal ranges of temperature are considerably smaller (averaging 1.5° C. in the mean) on the island of Föhr than over the mainland. Photometric measurements of the relative influence of water and land surfaces upon the intensity of the light, and measurements of the value of the light reflected from different kinds of soil, are included in the report. In view of the hygienic importance which is now known to attach to the character and amount of sunlight and of sky-light, such observations have considerable local interest.

R. DEC. WARD.

ALBERT, T. J. Brunswick. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6b, pp. 7-9. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

— **Bodenbenutzung, Die, und der landwirtschaftliche Anbau, 1913.** *Beiträge zur Statistik des Grossherzogtums Hessen*, Vol. 63, 1913, No. 5, pp. 1-68. Grossh. Hessische Zentralstelle für die Landesstatistik, Darmstadt, 1914.

EAGER, G. E. Barmen. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6c, pp. 1-2. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

— **Ernte in Preussen 1913, Die.** *Zeitschr. des Kgl. Preussischen Statistischen Landesamts*, Vol. 54, 1914, pp. xvii-xix.

FEE, W. T. Bremen. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6c, pp. 2-4. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

GALE, W. H. Munich. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6c, pp. 13-16. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

HAMMER, ERNST. *Die neuen Normalhöhenpunkte für Preussen.* *Petermanns Mitt.*, Vol. 62, 1916, Jan., p. 21.

HARRIS, H. W. Frankfort on the Main. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6b, pp. 1-7. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

JEWETT, M. A. **Kehl.** *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6b, pp. 10-15. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

KEMPER, G. H. **Erfurt.** *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6c, pp. 11-13. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

KLUTE, F. **Büsserschneebeobachtung im Schwarzwald.** Diagr., ills. *Zeitschr. für Gletscherkunde*, Vol. 10, 1916, No. 1, pp. 56-59.

MAGER, F. **Bericht über kulturgeographische Arbeiten im Herzogtum Schleswig.** *Zeitschr. Gesell. für Erdkunde zu Berlin*, 1915, No. 9, pp. 545-558.

— **Map reading of central Europe, Everybody's aid to the, compiled with special regard to Germany.** iv and 87 pp.; index. William Clowes and Sons, Ltd., London, 1915. 6 x 4.

MEISSNER, OTTO. **Neue Reduktion der Niveaumeterablesungen des hydrostatischen Nivellements auf dem Telegraphenberg bei Potsdam.** Diagr. *Beiträge zur Geophysik*, Vol. 14, 1915, No. 2, first part, pp. 156-186.

SCHULTE IM HOFE, A. **Die Welterzeugung von Lebensmitteln und Rohstoffen und die Versorgung Deutschlands in der Vergangenheit und Zukunft.** *Beihefte zum Tropenpflanzer*, Vol. 16, 1916, No. 1-2, pp. 1-177.

WOOD, J. Q. **Chemnitz.** *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 6c, pp. 4-11. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

RUSSIA

LETHBRIDGE, ALAN. **The new Russia: From the White Sea to the Siberian steppe.** x and 314 pp.; maps, ills., index. E. P. Dutton & Co., New York, [1915]. \$5.00. 9 x 6.

There is an atmosphere of realism about Mr. Lethbridge's descriptions of Russia which makes his book at once interesting and worth reading. There are so few accounts of the Russian Empire from the point of view of its external aspect that this straightforward tale of things, places, and people seen fills a great need. The numerous photographs which the author has added to his own description are excellently chosen.

The starting point is Archangel, the port, the life of the inhabitants, and the terrible problem of forest fires in the wooded areas in that region. Next there is a visit to the island monastery of Solovetz (some 200 miles northwest of Archangel in the White Sea), one of the most extraordinary monuments to the monastic pioneer-colonizers of the Russian North. Along the White Sea littoral and back through Archangel to the Northern Dvina lies the route. From here the journey is made almost entirely by water, along the great rivers of northeastern Russia, past cities replete with huge, deserted churches, where the monks have been replaced by merchants, past alabaster cliffs and great virgin forests up into the mining districts of the Urals. Then over the Urals into the fertile farming and dairying country of Western Siberia and by water again down through the land of the Siberian cossacks to the Chinese frontier.

Mr. Lethbridge calls all this "New Russia" because it represents, with its boundless treasures of timber, mineral, and agricultural resources, Russia's economic power of the present and near future. The book is intended to develop the financial and economic interest of the English in the Russian Empire, yet the opportunities it points out should be carefully considered by Americans as well.

E. K. REYNOLDS.

BACKLUND, O. **Sur la détermination des différences des longitudes Pulkovo-Paris.** *Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1915, No. 4, pp. 273-274. [In Russian; see also entry below under Zemcov.]

BERG, E. **Les maxima extrêmes diurnes des précipitations dans la Russie d'Europe.** *Map. Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1914, No. 16, pp. 1217-1234. [In Russian.]

— **Chemin de fer de Pétrograd à la côte mourmane.** *Rev. Gén. des Sci.*, Vol. 27, 1916, No. 4, p. 104. [This topic was discussed in the Feb. *Review*, pp. 131-132.]

FEDOROV, E. **Sur la note des membres de l'Académie concernant l'étude des forces naturelles productives de la Russie.** *Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1915, No. 16, pp. 1679-1680. [In Russian.]

GALITZIN, BORIS. **Sur le tremblement de terre du 18 février 1911.** *Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1915, No. 10, pp. 991-998. [In Russian.]

— **Port of the midnight sun, The.** *Map. The Independent*, Vol. 86, 1916, No. 3520, p. 274. [Catharine Harbor on the ice-free Arctic coast of Russia. See article in the February *Review*, pp. 128-132.]

PURINGTON, C. W. **The pilgrims of the Ural: On the road to Verkotur.** Ill. *London Times Russian Suppl.*, 1916, May 27, No. 20, p. 11.

RAY, J. A. **Odessa.** *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 13a, pp. 4-11. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

— **Russia.** 53 pp. Guaranty Trust Company, New York, 1916. 7 x 5. [Informational pamphlet on Russian industries.]

STEBBING, E. P. **Forests of Russia: Immense reserves of timber.** Ills. *London Times Russian Section*, 1916, July 29, No. 22, p. 7.

VEREŠČAGIN, G. J. **Etudes sur les bassins d'eau douce situés dans les vallées des fleuves du sud-est de la Russie d'Europe.** *Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1915, No. 7, p. 588. [Brief note in Russian.]

VERNADSKIJ, V. I. **Sur l'étude des forces naturelles productives de la Russie.** *Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1915, No. 8, pp. 679-700. [In Russian.]

WINSHIP, NORTH. **Petrograd.** *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 13a, pp. 1-4. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

ZEMCOV, B. **Détermination des différences des longitudes Pulkovo-Paris.** *Bull. de l'Acad. Imp. des Sci. [de Pétrograd]*, Ser. 6, 1915, No. 4, pp. 275-276. [In Russian; see also entry above under Backlund.]

ASIA

MANCHURIA, KOREA, JAPAN

— **Forest Exploitation, Japan (Formosa).** *Board of Trade Journ.*, Vol. 93, 1916, May 18, p. 471. [Exports from the Mount Ari forests, opened three years ago, now amount to 3,000,000 cubic feet per annum. Recent exploration has revealed two similar timber resources situated respectively on the slopes of Mounts Hassen and Sansei. Together the newly discovered forests cover about double the area of those of Arisan, and they offer superior conditions for lumbering operations. Whereas the exploitation of the older forest necessitated construction of a 41-mile railroad up the mountain, the streams of the new areas will allow flotation of the logs to the place of shipment.]

HULBERT, H. B. **Japan and isothermal empire.** *Journ. of Race Development*, Vol. 6, 1916, No. 4, pp. 441-453. [By "isothermal" is meant lying in the same climatic zone, the thesis being that empires which encompassed regions strongly contrasted in climate were ephemeral.]

— **Korea, Government General of, Annual report of the meteorological observatory of the, for the year 1914.** 188 pp. Chemulpo, 1915.

OMORI, F. **The Sakura-jima eruptions and earthquakes, II. (On the sound and ash-precipitation areas of, and on the level changes caused by, the eruptions of 1914, with historical sketches of earlier Sakura-jima outbursts.)** 180 pp.; maps, diags., ills., bibliogr. *Bull. of the Imperial Earthquake Investigation Committee*, Vol. 8, 1916, No. 2. [The intensity of the earthquakes and volcanic outbursts of Japan, and the accompanying loss of life, have led in recent years to a detailed study of these phenomena. This report has highly interesting chapters on related effects, as follows: Meteorological conditions at the time of the eruption of 1914; Propagation of sound waves which accompanied the Sakura-jima outbursts of 1914; Abnormal changes in height of water of Kagoshima Bay due to the Sakura-jima eruption of 1914; Level change and horizontal displacement of the ground caused by the Sakura-jima eruption of 1914. The maps and graphs are high-grade in every respect. The rise of the ground in a number of instances coincident with volcanic activity is concluded to be the result of upward pressure of injected magma, and the fall of the ground to the loss of the extruded material.]

SCIDMORE, G. H. **Japan.** 8 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 55a. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

WATARAI, TOSHIHARU. **Nationalization of railways in Japan.** 156 pp.; map, bibliogr. *Columbia Univ. Stud. in Hist., Econ. and Public Law*, Vol. 63, 1915, No. 2. \$1.25. 10 x 6½.

CHINA

HARDING, GARDNER L. **Present-day China: A narrative of a nation's advance.** 250 pp.; ills. Century Co., New York, 1916. \$1. 7 x 4½.

The history and problems of republican China, its hopes and achievements, are

summed up in true journalistic style in this small volume. It is the author's conviction that the republican movement is no mere flash in the pan, but that the time has come when the Chinese are beginning to think for themselves. This optimistic view imparts its bright coloring to the sketches, which portray an enormous and sluggish mass of illiterate beings upon whom Western ideas of self-government are suddenly thrust. And yet one has only to read between the lines to realize that the Chinese revolution had little meaning to the natives and that the short-lived republicanism of their country was the work of a small band of inspired idealists who had practically no community of aims or thoughts with their countrymen. It is to be regretted that hardly any reference is made to the part played by American influences in these Chinese changes.

The topic of foreign covetousness is of course discussed by Mr. Harding. Japan's growing control and the dealings of European powers form the theme of his last chapters. Although the alien activity is presented as political, one cannot help feeling that a sketch of its economic background would have enlightened the reader more effectively. In this field the railway question alone is taken up.

— **China, Report on the foreign trade of: Abstract of statistics.** 93 pp. *China Maritime Customs Statist. Series Nos. 3 and 4 (Returns of Trade and Trade Repts.)*, 1915, Part 1. Shanghai, 1916.

— **Port trade statistics and reports: Central ports (Shanghai to Wenchow).** pp. 727-930. *China Maritime Customs Statist. Series Nos. 3 and 4 (Returns of Trade and Trade Repts.)*, 1915, Part 2, Vol. 3. Shanghai, 1916.

— **Port trade statistics and reports: Northern ports (Aigun to Kiaochow).** 407 pp.; map, diagr. *China Maritime Customs Statist. Series Nos. 3 and 4 (Returns of Trade and Trade Repts.)*, 1915, Part 2, Vol. 1. Shanghai, 1916.

— **Port trade statistics and reports: Yangtze ports (Chungking to Chinkiang).** pp. 409-726. *China Maritime Customs Statist. Series Nos. 3 and 4 (Returns of Trade and Trade Repts.)*, 1915, Part 2, Vol. 2. Shanghai, 1916.

WARD, F. K. **Glacial phenomena on the Yun-nan-Tibet frontier.** Maps, diagr., ill. *Geogr. Journ.*, Vol. 48, 1916, No. 1, pp. 55-68.

MALAY ARCHIPELAGO, INCLUDING THE PHILIPPINES

CORONAS, JOSÉ. **General weather notes.** Maps, ill. *Meteorological Bull.*, 1915, Oct., pp. 195-225. Manila Central Observatory, 1916. [The two severe typhoons of October, 1915, are described in detail.]

FORTGENS, J. **Vier weken zendingsarbeid op Taliabo.** Ills. *Mededeel. Nederland. Zendelinggenoot.*, Vol. 60, 1916, No. 1, pp. 49-74. [Missionary trip in the island of Taliabu east of Celebes.]

KONINGSBERGER, J. C. **Java, zoölogisch en biologisch.** Aflevering 11-12 (= pp. 493-663). Drukkerij Dep. v. L. N. en H., Buitenzorg, 1915. Fl. 2. 9½ x 7. [Final instalment of work.]

MASÓ, M. S. **Historia del Observatorio de Manila, fundado y dirigido por los Padres de la Misión de la Campaña de Jesús de Filipinas, 1865-1915.** 210 pp.; map, diagrs., ill., bibliogr. E. C. McCullough & Co., Manila, 1915. 10½ x 7. [Founded by the private enterprise of the Jesuit fathers, the observatory, though subsidized in turn by the successive Spanish and American governments, has remained under the skilled directorship of the order. Location in the center of origin of the Pacific cyclones confers exceptional value on the work of the station.]

MAYER, A. G. **Java, the exploited island.** *Scientific Monthly*, Vol. 2, 1916, No. 4, pp. 350-354.

— **Meteorological observations made at the secondary stations during the calendar year 1913.** 331 pp. *Ann. Rept. of the Weather Bureau [of the Philippine Is.]*, Part. 3. Manila, 1915.

MOSES, BERNARD. **Early days in the Philippines and the problem of the friar lands.** *Rept. of the 33rd Ann. Lake Mohonk Conference on the Indian and Other Dependent Peoples*, Oct. 20, 21, and 22, 1915, pp. 87-90.

— **Philippine Islands.** 7 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 80a. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

— **Philippine Islands, foreign commerce of the, Annual report of the Bureau of Customs and of, for the year ended December 31, 1915.** 199 pp.; diagrs., index. Bur. of Customs, Dept. of Finance and Justice, Manila, 1916.

— **Philippine Islands, Foreign commerce of the, January-December, 1914, July-December, 1913.** 164 pp.; diags., index. Bur. of Customs, Dept. of Finance and Justice, Manila, 1915.

PRATT, W. E. **The occurrence of petroleum in the Philippines.** *Map. Econ. Geol.*, Vol. 11, 1916, No. 3, pp. 246-265. [The presence of petroleum in certain of the Philippine Islands became known before the close of the Spanish régime. American investigation has extended the known area of occurrence, and lately examination has been made of the product and its natural residues. Apparently the oil is similar to that obtained from beds of the same age (Miocene) and same general character in adjacent countries where it is exploited on a profitable basis. Although no definite commercial prospects can be held out, indications are such as to warrant more detailed exploration.]

RIVERS, W. C. **The Moro as a factor in the Philippine problem.** *Rept. of the 33rd Ann. Lake Mohonk Conference on the Indian and Other Dependent Peoples*, Oct. 20, 21, and 22, 1915, pp. 103-106.

TAYLOR, F. W. **Agricultural development in the Philippines.** *Rept. of the 33rd Ann. Lake Mohonk Conference on the Indian and Other Dependent Peoples*, Oct. 20, 21, and 22, 1915, pp. 90-98.

TUTHERLY, WILLIAM. **The Philippines in world politics.** *Rept. of the 33rd Ann. Lake Mohonk Conference on the Indian and Other Dependent Peoples*, Oct. 20, 21, and 22, 1915, pp. 124-133.

VAN DER HAAS, P. A. H. **Een voorstel en een paar vragen in het belang der Javasukerindustrie.** *De Indische Gids*, Vol. 38, 1916, No. 2, pp. 149-167. [Sugar industry of Java.]

AUSTRALASIA AND OCEANIA

AUSTRALIA, NEW ZEALAND

CAMBAGE, R. H. **The mountains of eastern Australia and their effect on the native vegetation.** *Map. Journ. and Proc. Royal Soc. of New South Wales*, Vol. 48, 1914, Part 2, pp. 267-280. Sydney, 1914.

The mountain ranges of eastern Australia, averaging 3000-4000 feet in height, and from 10 to 300 miles from the coast, exercise an important influence on climate and vegetation. East of these ranges, through the effect of the mountains in causing precipitation from the easterly rain-bearing winds, the climate is moist and the characteristic type of vegetation is jungle or "brush." The conditions most essential to the development of "brush" are abundant rainfall and sufficient warmth; it is naturally excluded from the plateaus west of the dividing ranges where the climate is dry and the winters are cold. Here the prevailing type of vegetation is open forest or low scrub. Wherever gaps across the ranges too low to effect precipitation occur, the "brush" vegetation is absent and the interior types approach the coast. The flora of the plateaus includes an antarctic element which is unable to flourish in the lower coastal strip.

GEORGE E. NICHOLS.

MASSON, E. R. **An untamed territory: The Northern Territory of Australia.** xii and 181 pp.; maps, ills. Macmillan & Co., Ltd., London, 1915. \$2.00. 8 x 5½.

Simplicity and spontaneity of style and well-balanced observation create in this unpretentious narrative an admirable picture of life in the least-known section of Australia. In this region, where human affairs are little complicated as yet, geographic controls are easily recognized. They constitute the background of the narrative from the beginning, where one is immediately transported to the erstwhile "hopeless, unwanted land." "It is part of Australia, and yet utterly remote from the civilized states, separated from them by a fortnight's journey by sea; it is close to the East and yet not of the East. Only five days distant there is Java, with a swarming native population, with ancient temples and other relics of a historic past; to the north lies Manila, with palm trees and plantations; and in ten days' sail—less time than it takes to reach Sydney—there is Hong Kong, the very center of the Orient." Thence against the background of nature are portrayed various aspects of Port Darwin, where mingle varied human streams—white officials, Chinese traders, Malay pearlfishers, and aborigines from the bush. Excursions farther afield bring into view coasts as far as the mouth of the Roper River in the Gulf of Carpentaria and "out bush" as far as Oenpelli, home of a pioneer settler in the buffalo-hunting country, ground now made classical through the ethnographical researches of Baldwin Spencer.

— **Adelaide Chamber of Commerce, Sixty-sixth annual report of the.** 132 pp.; ills. Adelaide, 1916.

ASTON, B. C. **The vegetation of the Tarawera Mountain, New Zealand. Part 1: The north-west face.** Ills., bibliogr. *Journ. of Ecology*, Vol. 4, 1916, No. 1, pp. 18-26.

— **Australia, Early knowledge of.** *Victorian Geogr. Journ.*, Vol. 32, 1916, Part 1, pp. 31-41. Victoria.

BALL, L. C. **The wolfram mines of Mount Carbine, north Queensland.** 96 pp.; map, diagrs., ill. *Geol. Survey of Queensland Publ. No. 251*. Brisbane, 1915. [With a 7-page section on physiography, water supply, and timber resources, and a contour map on the scale of 1:4,000.]

CONDLIFFE, J. B. **The external trade of New Zealand.** Diagrs. *New Zealand Official Year-Book*, Vol. 24, 1915, pp. 858-962. Wellington.

— **Diatomite from Australia.** *Bull. of the Imperial Inst.*, Vol. 14, 1916, No. 1, pp. 41-44. [The German source of infusorial earth, or *kieselguhr*, being cut off, attention is drawn towards the Australian deposits, of which the best known occur at Lillieur, northwest of Ballarat, Victoria.]

FRASER, MALCOLM, edit. **The New Zealand official year-book, 1915.** xii and 1004 pp.; maps, diagrs., index. John Mackay, Wellington, N. Z. 1915. 8½ x 6.

GRAY, G. J. **Geological reconnaissance of Arnheim Land.** *Bull. of the Northern Territory No. 14*, pp. 20-31. Dept. of External Affairs, Melbourne, 1915. [For illustrative map, see entry under H. I. Jensen, below.]

HUNT, H. A. **Australian monthly weather report and meteorological abstract: Annual summary, 1912.** Vol. 3, No. 13, pp. 623-686. Maps. Commonwealth Bur. of Meteorol., Melbourne.

HUNT, H. A. **Temperature departures in Australia, 1915.** Ills. *Symons's Meteorol. Mag.*, No. 601, Vol. 51, 1916, pp. 4-6.

HUTCHINS, D. E. **Australian forestry.** *Trans. of the Royal Scottish Arboricultural Soc.*, Vol. 30, 1916, Part 2, pp. 123-126. Edinburgh.

JENSEN, H. I. **Report on the geology of the country between Pine Creek and Tanami.** Maps. *Bull. of the Northern Territory No. 14*, pp. 5-19. Dept. of External Affairs, Melbourne, 1915. [The number of the *Bulletin* in which this paper appears is accompanied by a general geological map of the Northern Territory, 1:1,400,000, which may also serve to illustrate this and the two other individual articles listed in this section under G. J. Gray and R. J. Winters.]

KNIBBS, G. H., edit. **Census of the Commonwealth of Australia taken for the night between the 2nd and 3rd April, 1911.** Vol. II: Parts 1-8, of the detailed tables, 1073 pp.; Vol. III: Parts 9-14 of the detailed tables, pp. 1076-2296, index. McCarron, Bird & Co., Melbourne, [1914]. 13 x 9. [Part 8 in Volume II deals with the non-European races.]

LE SOUEF, W. H. D. **Aboriginals' culinary methods and kitchen middens.** Ills. *Victorian Geogr. Journ.*, Vol. 32, 1916, Part 1, pp. 1-11. Victoria.

MACLEOD, N. J. **Statistics of the State of Queensland for the year 1914.** Part 1: **Index.** xii pp. Part 2: **Interchange.** 143 pp. Part 6: **Local government.** 22 pp. Part 8: **Vital statistics.** 13 pp. Part 9: **Production.** 66 pp. Part 10: **Summary of statistics.** 14 pp. Brisbane, 1915. [Part 2 contains trade statistics; Part 6, area and population of towns and shires.]

— **New South Wales, Annual report of the Department of Mines, for the year 1915.** 213 pp.; maps, diagrs., index. Sydney, 1916.

OSTENFELD, C. H. **Skildringer af Vest-Australiens Natur, saerligt dets Plantevaekst.** Map, ill. *Geografisk Tidsskrift*, Vol. 23, 1915-16, No. 2, pp. 35-46; No. 4, pp. 132-148. Copenhagen.

SMITH, F. H. **Australasian markets for American lumber.** 48 pp. *Bur. of Foreign and Domestic Commerce Special Agents Series No. 109*. Dept. of Commerce, Washington, D. C., 1915.

SPEIGHT, R. **The lakes of New Zealand.** *New Zealand Official Year-Book*, Vol. 24, 1915, pp. 963-969. Wellington.

TAYLOR, GRIFFITH. **Initial investigations in the upper air of Australia.** 16 pp.; maps, diagrs. *Commonwealth Bur. of Meteorol. Bull. No. 13*. Melbourne, 1916.

TWELVETREES, W. H. **Reconnaissance of country between Recherche Bay and New River, southern Tasmania.** 38 pp.; maps, diagrs., bibliogr. *Tasmania Geol. Survey Bull. No. 24*. Dept. of Mines, Hobart, 1915. [The reconnaissance was undertaken with specific reference to reported indications of petroleum occurrence. This part

of the island is practically unknown. Since the first exploration by Captain James Kelly in 1815, when landing was prevented by the natives, its inhospitable shore-line has been penetrated only by a few hunters, fishermen, and prospectors. The prospects of oil occurrence, while not negated by the report, are not regarded favorably.]

WALLIS, B. C. **The climate of New Zealand.** Maps. *Geogr. Teacher*, No. 43, Vol. 8, 1915, Part 3, pp. 179-183.

WINTERS, R. J. **Geological observations on the country between Pine and Newcastle Waters.** *Bull. of the Northern Territory No. 14*, pp. 32-41. Dept. of External Affairs, Melbourne, 1915. [For illustrative map, see entry under H. I. Jensen, above.]

POLAR REGIONS

ANTARCTIC

MOHN, H. **Roald Amundsen's Antarctic expedition, scientific results: Meteorology.** Diagsr. Reprinted from *Videnskapselskapets Skrifter: 1. Mat.-Naturv. Klasse*, 1915, No. 5, pp. 1-78. Christiania.

Dr. H. Mohn, author of this report on the meteorological results of Roald Amundsen's Antarctic expedition, also made the official and complete report on the meteorological work of the Nansen Arctic expedition in the *Fram*. The volume is in two parts, the first dealing with the observations at Framheim, and the second with the observations made on the sledge journey.

The essential facts regarding the meteorological conditions at Framheim are these. August is the coldest month, with -34.2° Fahr. (-36.8° C.), and December the warmest, with -23.7° (-4.6° C.). There is no regular diurnal march of temperature during the dark season. Lower temperatures are more frequent at 2 P. M. than at 8 A. M. and 8 P. M. Even in the summer season, the temperature at 2 P. M. rises only 2° to 3.5° (1° to 2° C.) above the daily mean. The absolute maximum temperature was 31.6° (-0.2° C.), and the absolute minimum -74.2° (-59° C.). The mean annual temperature was -11.2° (-24° C.). The mean annual temperature of the latitude of Framheim in the northern hemisphere is 0.7° (-17.4° C.). The prevailing wind is east, is rather wet, and seems to be essentially an incurving cyclonic wind, coming from the sea. The minimum pressure in these cases seems to be towards the north or northwest, in Ross Sea. These easterly winds are relatively mild, having a temperature 11° (6° C.) above normal, and are accompanied by snow in 56 per cent of the cases. North and northwest winds are the wettest, and the driest wind is south. Gales are not frequent, and the maximum velocity was only 20 meters per second. Northerly winds were the cloudiest, and southerly the clearest. The most frequent cloud form was stratus, followed by cirrus and altocumulus. No rain fell. Snow came only on every fifth day. The greatest probability of snow was during calms.

The sledge journey across the great ice cap to the South Pole and back again gave a surprisingly large number of meteorological observations, which are naturally of the greatest interest. The maximum actual temperature observed between Framheim and the South Pole was 23.4° (-4.8° C.), and the minimum actual temperature was -66.3° (-54.6° C.). The direction of maximum frequency of the wind on the plateau was southeast. The warmest winds were from the sea and the coldest from the interior. Southeast winds brought the greatest frequency of snowfall. Stratus, cirro-stratus, and cirrus were the cloud forms most frequently seen. Cumulus was rare. The pressure and wind directions in December, 1911, indicated that in the higher regions, above 2000 and up to 2800 meters, there were "cyclonic movements of the air, with centers in the northeast quadrant, higher temperature, and a great deal of precipitation." This confirms the view of Meinardus, that the Antarctic anticyclone exists only in the lower strata, appearing emphatically only when sea-level pressures are considered. Owing to the great cold, the vertical decrease of temperature is so rapid that above a given level the pressure over the South Polar region must be lower than over the surrounding areas. Thus a polar cyclone overlies the lower anticyclone.

R. DEC. WARD.

TAYLOR, GRIFFITH. **With Scott: The silver lining.** xiv and 464 pp.; maps, diagsr., ill., index. Dodd, Mead and Co., New York, 1916. \$5.00. $9\frac{1}{2} \times 6\frac{1}{2}$.

Because of the tragic fate which overtook the second expedition to the Antarctic of Captain Robert Scott, we have as yet no complete popular account such as exists for other Antarctic expeditions. "Scott's Last Expedition," which appeared in the usual two-volume form (reviewed in *Bull. Amer. Geogr. Soc.*, Vol. 46, 1914, pp. 281-285), included the diary of Captain Scott and the narrative reports of the leaders of the subordinate parties. Dr. Griffith Taylor, the geologist of the expedition and Physiog-

rapher to the Commonwealth of Victoria at Melbourne, has now supplemented these volumes by a personal narrative report, which supplies much new material that we may presume would have found a place in the report of the leader, had he lived to write one. To the many beautiful illustrations from photographs appearing in the earlier volumes, 67 full-page illustrations are here added of the same excellent quality.

To scientists it may perhaps appear that Doctor Taylor has introduced into the pages of his narrative some matters of rather trifling interest, though for this the excuse may be offered that such a volume is issued not primarily for men of science but for the general public and particularly for the members of the expedition and their relatives and friends. To this clientele personal touches possess an absorbing interest. The volume has been edited in the absence of the author from England by Mr. Leonard Huxley, who likewise edited the two volumes of "Scott's Last Expedition."

From a scientific standpoint the most important sections of the book are numbers III and VI, which describe the First Western Expedition (January-March, 1911) and the Granite Harbor Expedition (November, 1911, to February, 1912). Both of these expeditions were commanded by Doctor Taylor and had for their object the preparation of a map of the area west and southwest of MacMurdo Sound, of which area a rough reconnaissance map had been undertaken by Ferrar, the geologist of the first Scott expedition ("National Antarctic Expedition," Vol. I, map in cover). The preparation of this map by Taylor and his associates, though carried out under great difficulties, has supplied us with a piece of accurate cartographic work which is unique for the Antarctic regions. The area covered is more than a hundred miles in length, has an average breadth of perhaps thirty miles, and is drawn on the scale of five miles to the inch. This map was based upon theodolite measurements and plane-table sketches and has represented upon it more than a dozen newly discovered glaciers of considerable size, together with a larger number of subordinate ones, most of which have received names. Such glaciers represent various types which, because of the climatic conditions of the Antarctic continent, are in some sense peculiar to the region.

How peculiar Antarctic glacial conditions are, may perhaps be illustrated by Taylor's assertion that in a hundred miles of morainic debris which he traversed he saw but one scratched boulder. Upon the other hand his studies indicate that water streams are hardly so rare as has sometimes been supposed on the basis of earlier reports. Of special interest is Doctor Taylor's "palimpsest" theory of erosion by the modified outlet glaciers on the border of the continental ice sheet (pp. 174-175). Doctor Taylor holds that certain of the outlet glaciers are terraced as a result of the persistence of cwms (cirques) in some instances, and in others to the operation of the nivation process during a former retreat of the ice tongue up the valley. His studies of physiographic conditions within this special region have in part been treated with greater fullness in papers which appeared in the *Geographical Journal* from October to December, 1914. In confirmation of his view that cirques do not become entirely effaced when overridden by ice masses of the blanketing type, one should examine the plate at page 350 of the volume under review and compare it for additional confirmation with the map by Nordenskjöld of James Ross Island in West Antarctica (map 3, Vol. I, *Wissenschaftl. Ergebn. der schwed. Südpolar-Exp.*).

To the physiographer the scientific sections of the volume have exceptional interest because Doctor Taylor is one of the few trained physiographers who have studied with any care the borderland of either of the great continental glaciers. Of special interest to the geologist is the discovery within the Beacon sandstone of fish plates which fix this horizon with its layers of coal as in all probability of Devonian age.

WILLIAM HERBERT HOBBS.

ADAMS, CYRUS C. **The highest continent.** Maps, ills. *Amer. Review of Reviews*, Vol. 53, 1916, No. 5, pp. 600-602. [Antarctic Continent.]

ARCTOWSKI, HENRYK. **Shackleton's South Polar expedition: The value of his scientific observations.** Map, ills. *Scientific American*, 1916, June 17, pp. 636 and 645. [Referred to on p. 57 in the article on Shackleton in the July *Review*.]

D[INES], J. S. **Seesaw of pressure, temperature, and wind velocity between Weddell Sea and Ross Sea.** By R. C. Mossman. *Monthly Weather Rev.*, Vol. 44, 1916, No. 3, p. 113. [Reprinted from *Science Abstracts*, Sect. A, Jan. 21, 1916. Reviewed in the April *Review*, pp. 323-324.]

PIRIE, J. H. H. **Glaciology of the South Orkneys (Scottish National Antarctic Expedition).** Map, diagrs., ills., bibliogr. *Trans. Royal Soc. of Edinburgh*, Vol. 49, 1913, Part 4 (No. 15), pp. 831-863. Edinburgh. [Abstracted in the Nov. *Review*, p. 380.]

RABOT, CHARLES. **Le drame de l'expédition Shackleton dans la mer de Weddell.** Map. *La Nature*, No. 2233, 1916, July 15, pp. 37-40.

SCOTT, R. F. **The great ice barrier and the inland ice.** *Geogr. Journ.*, Vol. 46, 1915, No. 6, pp. 436-447. [Lecture delivered by Captain Scott to the members of his expedition at Cape Evans on June 7, 1911.]

— **Shackleton Antarctic expedition.** *Scottish Geogr. Mag.*, Vol. 32, 1916, No. 5, pp. 242-247.

— **Shackleton's, Sir Ernest, Antarctic expedition.** *Map. Nature*, No. 2432, Vol. 97, 1916, June 8, pp. 301-303.

MATHEMATICAL GEOGRAPHY

SURVEYING AND GEODESY

HOHENNER, HEINRICH. **Über die rationelle Vermessung eines Landes.** 20 pp.; diags., ills. E. F. Wintersche Buchdruckerei, Darmstadt, 1913. 9 x 6.

In this address, Professor Hohenner describes in simple language the methods and development of surveying from the simple measurement of the area and boundaries of the town commons to a complete national geodetic survey. The pamphlet is illustrated by plates showing simple town plats, followed by base line and triangulation development and heliotrope and high signal towers used in the French, Prussian, and United States surveys. Mathematics is entirely avoided, thus making a very readable popular exposition of the subject.

JAMES GORDON STEESE.

BOWIE, WILLIAM. **Innovations in precise-leveling methods in coast survey.** Ills. *Engineering News*, Vol. 76, 1916, No. 2, pp. 74.

LANE, A. C. **On certain resemblances between the earth and a butternut.** *Diagr. Scientific Monthly*, Vol. 1, 1915, No. 2, pp. 132-139.

— **Metro manual: A hand book for engineers, containing technical information regarding the construction, adjustment, and use of transits, tachymeters, theodolites, alidades, levels, etc.** xl and 199 pp.; diags., ills., index. Bausch & Lomb Optical Co., Rochester, N. Y., 1915. 7 x 4½. [Concise and handy. Constitutes the ninth enlarged and revised edition of Saegmüller's "Vest Pocket Handbook."]

REEVES, E. A. **Night marching by stars.** Diags. *Geogr. Journ.*, Vol. 47, 1916, No. 6, pp. 440-455.

RODEN, E. K. **Method of calculating the intersection point of St. Hilaire position lines.** Diags. *U. S. Naval Inst. Proc.*, No. 162, Vol. 42, 1916, pp. 481-491.

ROJÍ, D. A. **La legua marina de Don Jorge Juan.** *Rev. Gen. de Marina*, Vol. 78, 1916, No. 6, pp. 751-765. Madrid. [Discussion of the length of the league as determined from the measurement of a meridional arc by the French Academy of Sciences expedition to Ecuador in the early eighteenth century.]

UTTMARK, F. E. **A new system of navigation and nautical astronomy.** Diags. *Scientific American Suppl.*, No. 2111, Vol. 81, 1916, June 17, pp. 396-398.

PHYSICAL GEOGRAPHY

GEOPHYSICS

BAUER, L. A. **Solar radiation and terrestrial magnetism.** *Terrestr. Magnet. and Atmosph. Electr.*, Vol. 20, 1916, No. 4, pp. 143-158.

DÍJK, G. VAN. **The magnetic character of the year 1915.** *Terrestr. Magnet. and Atmosph. Electr.*, Vol. 21, 1916, No. 3, pp. 149-150.

DUFFIELD, W. G. **Apparatus for the determination of gravity at sea.** Diags. *Proc. of the Royal Soc.*, No. 644, Series A, Vol. 92, 1916, pp. 505-517. London.

NICHOLS, E. H. **Investigation of atmospheric electrical variations at sunrise and sunset.** Diags. *Proc. of the Royal Soc.*, No. 462, Vol. 92, 1916, pp. 401-408.

SIMPSON, G. C. **Some problems of atmospheric electricity.** *Monthly Weather Rev.*, Vol. 44, 1916, No. 3, pp. 115-122. [The problems presented relate to the radio-activity theory of the ionization of oceanic air; the earth's penetrating radiation; the origin and maintenance of the earth's charge; the nature and cause of ball lightning; the nature and origin of the aurora.]

WOLFF, H. **Die Schwerkraft auf dem Meere und die Hypothese von Pratt.** Bibliogr. *Zeitschr. für Vermessungswesen*, Vol. 45, 1916, No. 1, pp. 1-22; No. 2, pp. 33-54.

GEOLOGY AND GEOMORPHOLOGY

FRIEDERICHSEN, MAX. **Moderne Methoden der Erforschung, Beschreibung und Erklärung geographischer Landschaften.** 36 pp.; diags. *Geogr. Bausteine* No. 6. Justus Perthes, Gotha, 1914.

This interesting essay by a well-known German geographer is essentially a comparison of the methods of the American and German schools of geography as represented in the writings of William Morris Davis and Siegfried Passarge, in which the final honors are thought by the author to lie with the German school.

Friederichsen prefaces his essay with a short biographical sketch of Professor Davis. Then follows an analysis of Davis' method of treating geographical subjects, illustrated by examples taken from the latter's "Erklärende Beschreibung der Landformen." Our critic doubts whether the method is so original as to deserve the prominence accorded it in geographical circles. In any case, the method has many faults, as Hettner and Passarge especially have pointed out. It is one-sided, for Davis treats landforms alone and pays no attention to their relation to the living world. Its terminology is bad, for, while a new terminology for a new science is both customary and necessary, Davis gives more new names than are needed and follows the doubtful procedure of designating stages of development in terms of man's life stages. The impropriety of the nomenclature is clearly apparent in the case of valley development, which is really dependent on the kind of rock, as shown by Hettner. The use of block diagrams by Davis' followers is regarded as dangerous, although Davis' own drawings have merit. And, finally, Davis' followers in particular have strikingly neglected to investigate the forces which produce landforms.

Friederichsen then observes that Passarge, clearly perceiving the weaknesses of Davis' method, has endeavored to direct students of landforms away from American toward less objectionable methods. A brief sketch of Passarge's life and writings is followed by an analysis of that author's "Physiologische Morphologie," in which Passarge concludes that changes in landforms seldom take place in the simple manner supposed by Davis, that Davis' scheme of landform description is a too rapid generalization based on observations insufficient in number and made with insufficient care, and that the scheme suffers from the fact that preconceived ideas unfavorably influence the observer's description of natural features. Passarge's own preference is for a series of "physiologic-morphologic" maps, showing on separate sheets: (1) topography by contours, (2) degree of slope, (3) geology, (4) resistance of rock according to hardness and jointing, (5) permeability and resistance to erosion, (6) porosity of waste cover, (7) erosion forms and types of land waste, (8) resistance of the vegetal covering. Friederichsen admits the difficulty of preparing such maps and thinks they must be restricted to very limited areas, while Davis' method may be used for broader regions if its weaknesses are avoided. But Passarge is a true geographer and does not make one-sided physiographic investigations. He makes an important step in advance of Davis when he tries to analyze an entire district, including the animal and vegetable world, and especially man and his works.

It is always interesting to see ourselves as others see us. The comparison of methods would have a higher value, however, if both Friederichsen and Passarge possessed a somewhat clearer conception of just what is, and what is not, involved in the so-called American method and particularly Professor Davis' method of landform description.

DOUGLAS W. JOHNSON.

BERG, ALFRED. **Wie unsere Erde geworden ist.** 94 pp.; diags., ills. Theod. Thomas Verlag, Leipzig, [1915]. 40 pf. 6 x 4½.

BLANCK, E. **Wie unsere Ackererde geworden ist.** 48 pp. Theod. Thomas Verlag, Leipzig, [1915]. 20 pf. 6 x 4½.

COBB, COLLIER. **Pocket dictionary of common rocks and rock minerals.** 2nd edit. vi and 53 pp. Dept. of Geol., Univ. of North Carolina, Chapel Hill, N. C. 1915. 7 x 5.

DAVIS, W. M. **The principles of geographical description.** Diags., index, bibliogr. *Annals of Assoc. Amer. Geogrs.*, Vol. 5, 1916, pp. 61-105. [The most complete exposition yet published by Professor Davis of his methods and standards of physiographic description and interpretation. The essentials of parts of the essay have been published before, but the complete argument will undoubtedly become a classic in geographic literature. The only criticism we would offer relates to excessive fullness in the details of psychologic processes and their relation to physiography. A good deal of this matter will strike the average reader as more elementary than necessary. But the mastery of the whole paper by a young geographer will place him on one of the two main roads of the science.]

HARBOE, E. G. *Jordklodens Undersøgelse med Sejsmograf. Geografisk Tidsskrift*, Vol. 23, 1915-16, No. 5, pp. 188-197. Copenhagen.

HECKER, O. Bericht über die Tätigkeit des Zentralbureaus der Internationalen Seismologischen Assoziation von April 1914 bis April 1915. *Beiträge zur Geophysik*, Vol. 14, 1915, No. 2, third part, pp. 23-27.

LÄMMERMAHR, L. *Die Höhle: Bilder vom Leben und den Wundern unter Tag*. 87 pp.; diags., ills. Theod. Thomas Verlag, Leipzig, [1915]. 8½ x 5½.

NAVARRO, L. F. *Estado actual del problema de la Atlantis*. Maps. *Bol. Real Soc. Geogr.*, Vol. 58, 1916, No. 2, pp. 178-212. Madrid.

SAPPER, K. Bericht über die vulkanischen Ereignisse der Jahre 1895-1913. *Beiträge zur Geophysik*, Vol. 14, 1915, No. 1, first part, pp. 85-97; No. 2, first part, pp. 99-155.

HUMAN GEOGRAPHY

ECONOMIC GEOGRAPHY

Production

SWAIN, G. F. *Conservation of water by storage*. xvii and 384 pp.; map, diags., ills., index. Yale University Press, New Haven, 1915. \$3.00. 10 x 7.

This discussion of matters of broader geographic interest is one of the results of the Chester S. Lyman Lectureship Fund for maintaining a course of lectures at Yale University on the subject of water storage conservation. Professor Swain has brought out clearly the larger features of the water resources of North America, and particularly of the United States. He considers the relation of water conservation to the use and protection of other resources, and the development of water power not merely from its technical aspect, but from its bearing upon existing legal and economic problems. The chapter upon forests and stream-flow is particularly valuable in reviewing the present attitude of the public and of political organizations toward the matter. It is shown that with the same total rainfall, and with topographic and geographic conditions identical, the total run-off in the stream and its distribution through the year may vary enormously.

The author calls attention to the heated discussion as to the effect of forests upon rainfall and stream-flow and notes that at the present time it is practically agreed that the effect of forests upon rainfall is small. He concludes that, aside from exceptions and special cases, the forests improve the regularity of river-flow; further, that the erosion of mountain slopes is the principal cause of the silting up of our rivers.

"That the cutting-down of forests has been followed by the drying-up of springs is a matter of such common observation that it may be substantiated by literally hundreds of statements." "As a result of this discussion and of the experience of centuries in older countries, there is no doubt that forests, especially on steep slopes, promote the regularity of flow of streams by facilitating underground storage."

The reader is cautioned against extreme views in either direction with regard to the effect of forests. The author calls attention to the fact that the flat lands having good soil are needed for growing crops and other purposes and will be so needed as population increases, reserving for forests the steep slopes and mountain sides and other areas unsuited for crops. The forests are valuable national assets, and, independent of their crop of timber, they regulate and prevent erosion.

In the discussion of floods, two lines of procedure are indicated, (1) that of flood prevention or mitigation, and (2) that of flood protection. Under the first are those efforts which retard the discharge into the river channels by means of the construction of reservoirs, also by forestation or by cultivation; next are those for enlarging the channel or increasing the slope by dredging, providing cut-offs, or improving the carrying capacity. The use of reservoirs as a method of flood prevention is considered, and reference is made to the elaborate studies of the Pittsburgh Flood Commission.

The book is a valuable contribution to our knowledge of the subject, making accessible many geographic or hydrographic facts and conclusions buried in government documents or diffused through current literature.

F. H. NEWELL.

SCHMÜLL, J. H. *Rubber en rubberhandel*. Diagr. *Tijdschr. Econ. Geogr.*, Vol. 7, 1916, No. 3, pp. 99-197.

VOORHEES, J. F. *Climatic control of cropping systems and farm operations*. *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 612. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec. 1915-Jan. 1916.]